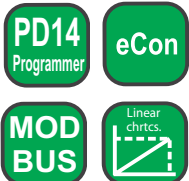


P21Z PROGRAMMABLE TRANSDUCER OF AC CURRENT, AC VOLTAGE AND FREQUENCY

FEATURES:

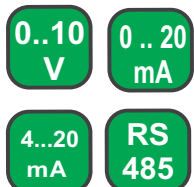


- Continuous conversion of AC current, AC voltage without DC component and frequency.
- Standard DC current or DC voltage output signal or RS-485 interface with Modbus protocol.
- Compact dimensions.
- 0.2 accuracy class.
- Fully programmable parameters by PD14 programmer and free e-Con program:
 - measurement averaging time,
 - conversion characteristic,
 - preservation of the output signal at overflows,
 - RS-485 transmission parameters.

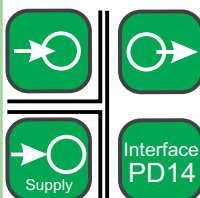
INPUTS:



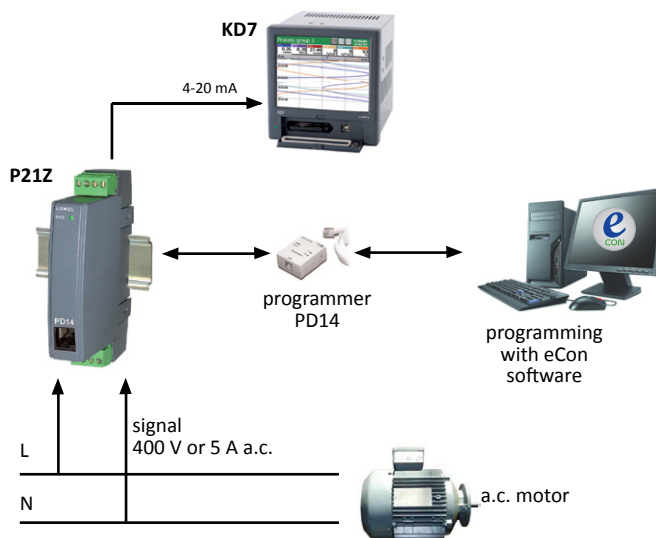
OUTPUTS:



GALVANIC ISOLATION:



EXAMPLE OF APPLICATION



Measurement and archiving of a.c. motor current/voltage work parameters.
Measured data are transmitted to the recorder/data logger.

OUTPUTS

Measuring ranges	Parameters	Overloads	Error
0...1...100...130 V a.c.	input resistance > 2 MΩ	Short duration overload (1s): 2 Un (< 1000V), 10 In Sustained overload: 150% Un (only for Un = 400 V and ±400 V), 120% Un (for other Un), 120% In	Basic error (at manufacturer's settings): ± (0.2% of range) Additional error from ambient temperature changes: ± (50% of the basic error/10K)
0...2,5...250...325 V a.c.			
0...4...400...600 V a.c.			
0...0,01...1,0...1,3 A a.c.	input resistance 10 mΩ ±10%	120% In	± 0.2% of range
0...0,05...5,0...6,3 A a.c.	input resistance 2 mΩ ±10%		
20...500 Hz (in voltage range 24...480)	input resistance > 2 MΩ		

OUTPUTS

Output kind	Properties	Remarks
0...20...22 mA	$R_{load} \leq 250 \Omega$	Resolution: 0.01% of the range
4...20...22 mA		
0...10...11 V		

DIGITAL INTERFACE

Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2 kbit/s

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EXTERNAL FEATURES

Weight	< 0.125 kg	
Dimensions	22.5 x 120 x 100 mm	
Protection grade (acc. to EN 60529)	ensured by the housing: IP 40	from the terminal side: IP 20
Fixing	on a 35 mm rail	acc. to EN 60715

RATED OPERATING CONDITIONS

Supply	85..253 V a.c. 40..400 Hz; 90..300 V d.c. 20..40 V a.c. 40..400 Hz; 20..60 V d.c.	power consumption: < 3 VA
Temperature	ambient: -20...23...60°C	storage: -25...85°C
Relative humidity	< 95%	inadmissible vapour condensation
Operating position	any	
Preheating time	15 min	
Averaging time of the measurement	≥ 0.5 s	1 second set by default

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	
Pollution grade	2	
Installation category	III (for the 400 V option - category II)	
Maximal phase-to-earth operating voltage	for the supply circuit: 300 V	acc. to EN 61010-1
	for the measuring input: 600 V cat. II (300 V - cat. III)	
	for the programming input: 50 V	
	for the output: 50 V	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAMS

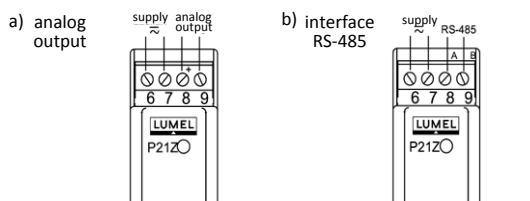


Fig. 1. Electrical connections of P21Z transducer: analog output and supply.

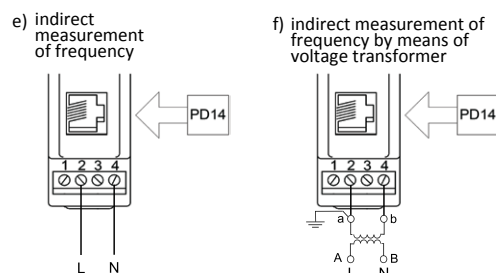
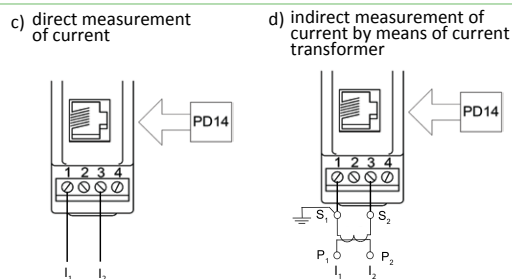
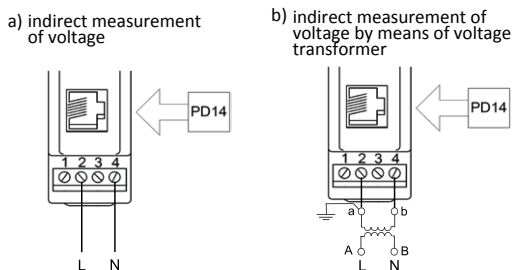


Fig. 2. Electrical connections of P21Z transducer inputs.

ORDERING

ORDERING CODES:

	P21Z -	X	X	X	XX	X	X
Input signal:							
100 V a.c.		1					
250 V a.c.		2					
400 V a.c.		3					
1 A a.c.		4					
5 A a.c.		5					
frequency 20...500 Hz		6					
Output:							
0...20 mA			1				
4...20 mA			2				
0...10 V			3				
RS-485			4				
Supply:							
85..253 V a.c. 40..400 Hz; 90..300 V d.c.			1				
20..40 V a.c. 40..400 Hz; 20..60 V d.c.			2				
Version:							
standard					00		
non-standard settings						NS	
custom-made*							XX
Language:							
Polish							P
English							E
other*							X
Acceptance tests:							
without extra quality inspection requirements							0
with an extra quality inspection certificate							1
acc. to customer's request							X

* - after agreeing with the manufacturer

Order example:

The code **P21Z - 1 1 1 00 E 0** means:

- P21Z** - transducer of a.c. current or a.c. voltage signals
- 1** - input signal: 1...100 V a.c.
- 1** - output signal: 0...20 mA
- 1** - supply voltage: 85..253 V a.c. 40..400 Hz; 90..300 V d.c.
- 00** - standard version
- E** - English language
- 0** - without extra quality inspection requirements

For more information about LUMEL's products please visit our website: www.lumel.com.pl

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